Contextual ambidexterity, paradox and team performance under uncertainty

Contextual Ambidexterity, Paradox and Team Performance under Uncertainty

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Organizational scholars have long been fascinated by dilemmas, trade-offs and paradoxes perhaps because, organizationally speaking, it is difficult to have it all. Organizations that are good at achieving outcomes such as efficiency are likely to find it harder to achieve others such as innovation, the classic exploitation-exploration dichotomy (March, 1991). Yet most organisations need multiple capabilities and this is reflected in the widespread interest in ambidexterity (O'Reilly and Tushman, 2013, Raisch and Birkinshaw, 2008, Gibson and Birkinshaw, 2004) and in paradox and contradiction (Lewis, 2000, Lewis, 2003, Smith and Lewis, 2011, Lewis and Smith, 2014).

There is clearly a connection between ambidexterity and paradox (Lewis and Smith, 2014). Ambidextrous organizations are “aligned and efficient in their management of today's business demands, while also adaptive enough to changes in the environment” (Gibson and Birkinshaw, 2004, p.209) and “capable of simultaneously exploiting existing competencies and exploring new opportunities” (Raisch et al., 2009, p.685). Paradox refers to “conflicting demands, opposing perspectives, or seemingly illogical findings” (Lewis, 2000, p.760) and “contradictory yet interrelated elements that exist simultaneously and persist over time” (Smith and Lewis, 2011, p.382).

Ambidexterity scholars tend to focus on how two or more apparently opposing outcomes can be pursued by the same organization. Sometimes this takes the form of partitioning opposing activities (Benner and Tushman, 2003, O'Reilly and Tushman, 2013). In structural separation different units focus on different priorities; under temporal separation different priorities are emphasized at different times by the same units. There is also a third form of ambidexterity, “contextual ambidexterity”, which refers to a “behavioural capacity to *simultaneously* demonstrate alignment and adaptability across an entire business unit” (Gibson

and Birkinshaw, 2004, p.209). This is achieved by creating a "context that encourages individuals to make their own judgments as to how best divide their time between the conflicting demands for alignment and adaptability" (Gibson and Birkinshaw, 2004, p.210). Whereas structural ambidexterity deals with contradictory activities by keeping them apart, contextual ambidexterity assumes that, under the right conditions, it is possible for the same unit to "hold" conflicting demands. This may be essential in some circumstances, for example in smaller units, or when decisions must be made very quickly. Contextual ambidexterity therefore appears to be an important point of connection between ambidexterity and paradox scholars, given the latter's focus on the coexistence of contradictory conditions and tendencies - 'x and y' rather than 'x or y'.

We summarize this argument in Figure 1. Requirements for ambidexterity are triggered by competing pressures. These requirements may be addressed by achieving ambidexterity through structural or temporal separation, or through contextual ambidexterity. In the last of these, the ability to tolerate paradox is likely to be important due to the need to address contradictory and opposing pressures in the same place and at the same time. Thus, 'contextual ambidexterity' and 'tolerance for paradox' may be more or less synonymous. However, as shown in the 'defences' box, contradictory pressures may provoke defensive responses so that paradox is avoided, rather than tolerated (Lewis, 2000). Defensive responses will restrict a unit's ability to meet competing demands and therefore will impact negatively on performance.

The final element in Figure 1 concerns the four conditions that support contextual ambidexterity, shown in the bottom left. These are: *Discipline*, which encourages actors to strive to meet the expectations placed upon them and fostered by clear standards of performance, candid and rapid feedback and a consistent application of sanctions; *Stretch,* a willingness to take on ambitious objectives, reinforced by shared ambition and a strong collective identity; *Support,* a willingness to help each other out; and *Trust* - the ability to rely on the commitments made by others (Gibson and Birkinshaw, 2004). We set out to test this model.

Methods & Results

Data were collected using a business simulation undertaken by 68 student teams each comprising 7-10 members, with 545 participants in total. The exercise consisted of a four-week preparation period culminating in a "trading period" of half a day, during which the teams had to select and physically produce orders for simple products to rigorous quality standards and tight delivery deadlines whilst trying to make a profit. The simulation requires ambidexterity on the part of the teams as they face simultaneous pressures for efficiency, quality, speed and

dependability, whilst operating within tight cost and time constraints. The environment is dynamic and uncertain, forcing adaption. Teams must therefore simultaneously address demands for both flexibility and stability (Grote et al., 2018) if they are to perform well.

Qualitative data on team activities were collected via direct observation and through presentations and reflective written reports produced by the participants after the exercise. Vignettes of around 4,000 words were constructed for each of the 10 highest and lowest performing teams (based on value of sales per head) and common themes extracted from these via a coding process involving all five authors.

Two types of quantitative data were collected. The first covered measures of objective performance for each team, including number of cards produced, value of sales, defect rate, on-time delivery and profit or loss. Secondly, participants completed individual questionnaires that measured the conditions supportive of contextual ambidexterity, namely, discipline, stretch and a combined scale of trust and support. Individual responses were aggregated into team-level scores of each attribute. Checks confirmed the reliability and validity of the measures. Within-team agreement checks supported aggregation of individual scores to create team scores.

The relationships between discipline, stretch and support-trust and the objective measures of performance are shown in Table 1, demonstrating that the conditions that support contextual ambidexterity are indeed related to performance. Discipline and trust-support show the strongest and most consistent relationships with performance; stretch is significant in relation to volume-based measures of performance, but not to quality or on-time delivery.

The presence of paradox within the teams was examined using the vignettes of the top 10 and bottom 10 performers, in which we sought to identify patterns that distinguished between the two groups. We noted four elements of paradox (x and y) that characterized the top-performing teams. The lowest performers, in contrast, appeared to lack the ability to combine these opposites (x or y). These findings are summarized in Table 2.

Discussion and Conclusions

In Figure 1 we argued that contextual ambidexterity and tolerance of paradox were closely related – perhaps even synonymous. Our quantitative data show that the conditions that support contextual ambidexterity (stretch, discipline and trust-support) correlate significantly with objective measures of team performance. The qualitative data indicate that the highest performing teams are able to maintain paradoxical tendencies in ways that the lowest performing teams cannot. We are wary of overstating the significance of these findings, but they

do demonstrate a relationship between team performance and contextual ambidexterity, and further suggest that contextual ambiguity coexists with tolerance of paradox. But why might stretch, discipline, and trust and support be found alongside paradox?

In the case of stretch, strong shared ambition encourages teams to persist rather than prematurely opting for either/or choices between different requirements. When performance is taken seriously, feedback on mistakes is more likely to be viewed as a necessary step towards the collective goal, rather than as personal criticism. The same applies to rules – if rules are construed as instruments to achieve a higher purpose it is easier to stick to them if they are needed and to revise them when they are not. With discipline, our teams manifested this in several ways - detailed planning, rigorous testing of assumptions, careful design and testing of processes and, within limits, adherence to self-imposed rules. In enacting these activities, the disciplined teams developed sophisticated representations of the environment and of their own operations. Thus, when they had to make changes during the trading period, they understood the likely consequences of these and hence more likely to improvise effectively. In contrast, less disciplined teams made changes the consequences of which they did not foresee or understand, thereby making things worse rather than better. Discipline, which might be expected to diminish flexibility, actually contributed to it.

Finally, trust and support supported paradox by making it easier for teams to simultaneously experience disagreement and conflict and a strong sense of unity and purpose. High-trust teams had the confidence to delegate key decisions to one or two members – this was particularly significant for rapid judgement calls during the trading period. Decision-making was thus both democratic and autocratic, team-based and individual. These findings do not of course demonstrate causality, but they provide a plausible explanation of why tolerance of paradox and contextual ambidexterity may be fostered by the same supporting conditions.

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Figure 1: Ambidexterity, Paradox and Performance

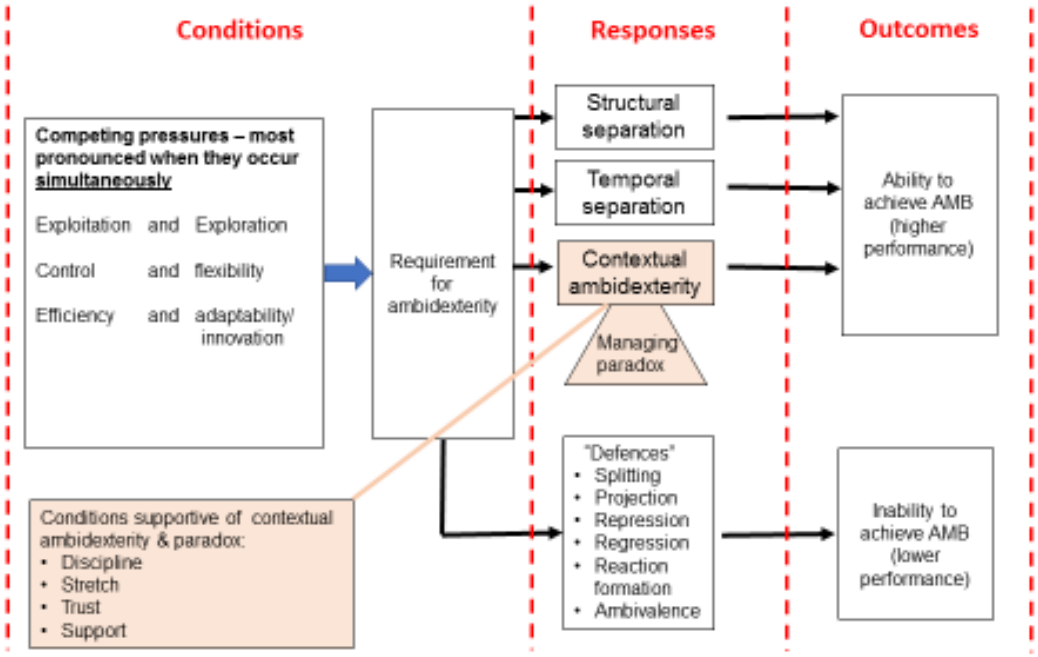

Table 1: Discipline, Stretch, Support-Trust & Performance

	Discipline	Stretch	Trust & Support
Delivered cards per head	0.17	0.36**	0.13
Value of sales per head	0.42***	0.33**	0.33**
Reject rate	-0.61***	-0.04	-0.51***
Non-fulfilment rate	-0.38***	-0.02	-0.31**
Profit (loss) per head	0.50***	0.12	0.43***
Discipline	1.00	-	-
Stretch	0.22	1.00	-
Trust & Support	0.56***	0.23	1.00

N= 68, * = $p \leq .05$, ** = $p \leq .01$, *** = $p \leq .001$

Table 2: Enactment of Paradox

Apparent Paradoxes			**Mode/s of failure**	**Illustrative Examples (positive & negative)**
Strong sense of unity and common purpose	AND	Tolerance of disagreement, ability to confront	a) Groupthink, reluctance to challenge b) Friction, conflict, defensiveness	(+) Conflict that made the members feel uncomfortable, but which were acknowledged to be useful in working the problem. (-) Reluctance to surface problems for fear of 'rocking the boat'.
Strict rules	AND	Willingness to let go of the rules when the situation demands it	a) Unresponsiveness to changing conditions b) Unstructured, uncoordinated, random behaviour	(+) "Flexible rules". Commitment to certain rules, but able to recognize when to be flexible. (-) 'Captured' by the rules.
Detailed planning	AND	Ability to let go of/ revise the plan	a) Over-planning, being 'captured' by the plan b) Uncontrolled, capricious deviation	(-) Over-commitment to the plan, reluctance or inability to deviate from it, even when things are clearly going wrong. (-) Capricious actions.
Democratic, inclusive decision-making (during preparation)	AND	Autocratic, centralized decision-making (during trading)	a) Decision paralysis, inability to respond quickly enough b) Overload, myopia	(+) Ability to switch from a flat structure to a hierarchical one during the trading period in order to make fast decisions. (-) Inability to respond quickly enough to unexpected events and problems